



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
COOKEVILLE ENVIRONMENTAL FIELD OFFICE
DIVISION OF WATER RESOURCES
1221 SOUTH WILLOW AVENUE
COOKEVILLE, TN 38506
PHONE 931-432-4015 STATEWIDE 1-888-891-8332 FAX 931-432-6952

March 13th, 2014

The Honorable Jeff Wilhite
Mayor of Baxter
200 Main Street
P.O. Box 335
Baxter, TN 38544

**RE: COMPLIANCE EVALUATION INSPECTION, FEBRUARY 28th, 2014
WASTEWATER TREATMENT, NPDES PERMIT # TN0021121
DISCHARGE TO MINE LICK CREEK; CITY OF BAXTER, PUTNAM
COUNTY; PERMIT EXPIRATION: JULY 31st, 2017**

Dear Mayor Wilhite:

The Division of Water Resources, Cookeville Environmental Field Office wishes to thank your staff for their courtesy during the recent Compliance Evaluation Inspection (CEI) at your Municipal Wastewater Treatment Plant and Collection System Pump Station locations on February 28th, 2014.

The CEI involved reviewing the following categories associated with the National Pollution Discharge Elimination System (NPDES) permit TN0021121.

Record Keeping

The NPDES wastewater permit was re-issued on August 1st, 2012. The permit expires July 31st, 2017. Collection system overflow reports for the last pump station in the collection system are submitted with the MOR(s)/DMR(s). Record keeping for the wastewater treatment plant is very good. Assisted by the city's contract engineer, the collection system operations continue to improve by collecting data from flow studies. This includes four (4) flow meters located in collection system zones.

Facility Review / Collection System / Effluent Receiving Stream

The Wastewater Treatment Plant (WWTP) was in operation and well kept. The receiving stream was observed and photographed along with the last downstream pump station (in the collection system) located at the WWTP. This pump station was not overflowing during the inspection. Flow monitoring devices were observed and found to be in working order. Automated samplers were operational. Sampler refrigeration repairs have been successful. The chlorine room was clean. Sulfur dioxide is used to remove chlorine residual prior to discharge to the receiving stream. The effluent discharge was clear. The signage at the effluent discharge to the stream was easily observed.

Collection System

The City of Baxter collection system pump stations were reviewed and discussed. The city continues its plans to replace collection system lines (clay pipe). A large amount of clay pipe exists within the collection system and is likely contributing to the overflows. The city is currently studying flows within four zones. Understanding that this clay pipe is in need of replacement with current technology such as PVC pipe, pipe bursting is being considered. The proposed bursting will start in the areas with the greatest inflow and infiltration as indicated by the flow metering. The collection system operator, Mr. Jason Pierce stated that the city is setting aside funds for the repair of the collection system. Maintenance on any municipal sewer collection system is a continuous activity. Point repairs and new connections should be reviewed and digitally photographed for quality assurance and reference. The cumulative repairs on the collection system should reduce the number of overflows at the final lift station (located at the sewer treatment plant). Five (5) collection system overflows within the last 12 month period (at the final pump station) have been reported: April 27th, 2013, July 5th, 2013, August 8th, 2013, December 6th, 2013, and March 3rd, 2014. Grease removal was discussed. Mr. Pierce believes that the restaurants near the Interstate 40 interchange have improved fats, oil and grease (FOG) removal by increasing the frequency of grease trap cleanout.

Mine Lick Creek, 303(d) listing, Page # 22

It is important to note that Mine Lick Creek is considered not supportive of its designated use classification due to sewer system overflows. The pollutant causes for the 303(d) listing are pathogens (*Escherichia coli*), Nitrate + Nitrite, and Phosphorus. A copy of the complete 2012 303(d) list can be reviewed on-line (Mine Lick Creek is on page # 22) at: <http://www.state.tn.us/environment/water/docs/wpc/2012-final-303d-list.pdf>

WWTP Laboratory

The laboratory was found to be in good order. Quality assurance measures are being performed. Duplicates and blanks are being performed at a rate of ten to one. The pH meter was recently replaced and was in good working order. A temperature log for lab equipment is being maintained. Dissolved oxygen analysis technology was discussed.

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Mayor, City of Baxter
NPDES Permit TN0021121

Nutrient testing and frequency was discussed. Ammonia analysis is performed 3 times per week and is consistently well below the permissible limit.

Sludge Handling Application

Sludge is land applied near the WWTP. Sludge analysis is performed annually. Sludge or bio-solids disposal to an approved landfill was discussed and additional information was electronically provided via email. Industry within the City of Baxter is predominantly retail sales and service. A large amount of commercial wastewater flow derives from the businesses near the busy Interstate 40 interchange.

Recommendations: Collection System Operations and Maintenance

The city should continue to research and purchase tools to inspect and repair the collection system such as video equipment, and smoke testing equipment. The city should continue to operate the wastewater treatment system specifically the collection system, with the goal to completely eliminate overflows and hydraulic overloading of the sewer treatment plant. Improvement in Mine Lick Creek may then be documented with the expectation of removal from the 303(d) list.

The Division of Water Resources, Cookeville EFO wishes to thank Mr. Tommy Buford, Jason Pierce, and yourself for your time and courtesy during the Compliance Evaluation Inspection.

If you have any questions, you may contact Oakley Hall in Cookeville via telephone at (931) 432-7635 or toll free at 1-(888)-891-8332. You may also use electronic mail at: Oakley.Hall@TN.gov.

Sincerely,



Johnny K. Walker
Division of Water Resources
Environmental Program Manager
Cookeville Environmental Field Office

Enclosures: Digital Photos; EPA Form 3560

CC: Division of Water Resources NPDES Files; Baxter STP, TN0021121; Putnam County



Tennessee Division of Water Resources

Photo Log: Baxter STP CEI; February 28th, 2014; Photos recorded by: Wm. Oakley Hall



The activated sludge basins are pictured, (extended aeration). They were operational.



The head-works including the bar screens were clean and operational.



Tennessee Division of Water Resources

Photo Log: Baxter STP CEI; February 28th, 2014; Photos recorded by: Wm. Oakley Hall



The influent wastewater is in the left cone. The effluent discharge is pictured in the right cone.



The effluent discharge at the weir is pictured. The weir was checked for calibration two months prior.



Tennessee Division of Water Resources

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The effluent discharge on the right descending bank of Mine Lick Creek (303d listed for pathogens).



The clear effluent discharge at the outfall is pictured. Mine Lick Creek was clear.



Tennessee Division of Water Resources

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The last pump station prior to the head-works is pictured. Overflows occur in this area.



The last pump station's wet well manhole is pictured. Overflows occur at this point. Hay bales are used to capture solids before they can enter Mine Lick Creek. (in the background).

Tennessee Division of Water Resources

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The pump station on "Main Street" is pictured. Repairs have been made to the ventilation pipe.



The electrical controls have been upgraded on the "Main Street" pump station.

Tennessee Division of Water Resources

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The "Hwy 70" pump station is pictured. Hardware has been replaced with stainless steel.



The "Phillips Street" pump station is pictured. Corrosion was discussed. Repairs are slated.

Tennessee Division of Water Resources

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The "7th Street" pump station is pictured. Contractors will be replacing failing steel with stainless.



The "Speedway" pump station is pictured. Testing was discussed prior to the fueling station's opening.



United States Environmental Protection Agency
Washington, D. C. 20460
Water Compliance Inspection Report

Compliance Monitoring Information

NPDES ID: TN0021121 Facility Site Name: Baxter STP
Address: 810 Elmore Town Rd. Baxter TN 38544

Compliance Activity Type: Inspection/ Evaluation

State of Tennessee

Compliance Monitoring Activity Name: CEI (Non-Sampling) Activity: CEI

*If Biomonitoring is selected as the Compliance Monitoring Activity Type, then enter circle method used:

Discreet Acute / Discreet Chronic / Discreet Method / Flow-Through Acute / Flow-Through Chronic

Compliance Monitoring Dates

Planned Start Date (1/20)

Actual Start Date (02/24/2014)

Planned End Date (1/20)

Actual End Date (03/12/2014)

Statutes and Section Information

Federal Statute: CWA- Clean Water Act

State Statute: Tennessee Water Quality Control Act

Programs: NPDES

Compliance Monitoring Reason: CORE/ Base Program

Compliance Monitoring Agency Type: STATE Agency Name: TDEC / DWR

Did EPA assist/ Inspection? Y/N

Circle: **State, Federal, or Joint Inspection**

Which party had the lead? N/A

Time physically conducting activity: Days 3.0 Hours

Compliance Monitoring Action Outcome: no violation

Compliance Monitoring Rating Code: Unrated

If Joint, what the purpose of the other party? N/A

Single Event Violations

Potential deficiencies/ violations observed: y / n If yes, list potential deficiencies/ violations below:

Areas Evaluated During Inspection (Check Only those areas Evaluated)

<input checked="" type="checkbox"/> Permit	<input checked="" type="checkbox"/> Self-Compliance Program	<input type="checkbox"/> Pretreatment
<input checked="" type="checkbox"/> Records/ Records	<input type="checkbox"/> Compliance Schedule	<input type="checkbox"/> Pollution Prevention
<input checked="" type="checkbox"/> Facility Site Review	<input checked="" type="checkbox"/> Laboratory	<input type="checkbox"/> Storm Water
<input checked="" type="checkbox"/> Effluent/ Receiving Waters	<input checked="" type="checkbox"/> Operations & Maintenance	<input type="checkbox"/> Combined Sewer Overflow
<input checked="" type="checkbox"/> Flow Measurement <u>reviewed</u>	<input checked="" type="checkbox"/> Sludge Handling/ Disposal	<input checked="" type="checkbox"/> Sanitary Sewer Overflow

Compliance Monitoring Summary

Attach additional sheets of narrative as necessary. The wastewater treatment plant is in good operational order. The inspector continues to have high confidence in the laboratory analytical results. The collection system requires maintenance. The municipality continues to set aside funds and perform research into collecting the worst case zones where high quantities of Inflow and Infiltration (I&I) of stormwater per 3.5F.

<u>[Signature]</u>	<u>TDEC/DWR / Cookeville EFO</u> <u>(931) 432-7635</u>	<u>3-12-14</u>
Inspector's Signature	Agency/ Office/ Phone	Date
<u>[Signature]</u>	<u>TDEC/DWR</u> <u>(931) 432-4015</u>	<u>3/19/14</u>
Manager's Signature	Agency/ Office/ Phone	Date

*For Items in bold see lists on back of form for choices.